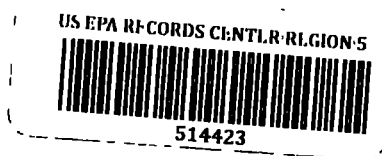




Engineers  
Planners  
Economists  
Scientists



February 7, 1985

W65902.A0

Mr. Paul Bitter  
U.S. EPA Region V  
230 South Dearborn Street  
Chicago, Illinois 60604

Dear Mr. Bitter

Subject: Reilly Tar Site, St. Louis Park, MN  
Preliminary Design of Carbon Treatment System

You recently forwarded me a copy of Calgon's preliminary design of a one-stage, two-column GAC system for installation at SLP-15 in St. Louis Park Minnesota. Chris Grundler, of EPA headquarters, has asked that I provide my written comments on the adequacy of the design to provide GAC treatment of water from SLP-15.

As we have discussed previously, the one stage configuration proposed by Calgon can provide effluent quality similar to the three-stage system included in CH2M HILL's conceptual design for the SLP-15 treatment system. We have expressed to Reilly our concern that such a system will result in higher O&M costs due to more frequent carbon replacement, more intensive monitoring requirements, etc. Since Reilly verbally accepted the potential for higher O&M costs in exchange for lower capital cost, I will not dwell further on this issue.

The preliminary design provided by Calgon appears to be a standard design of a two-column, single-stage system as supplied by Calgon. As such, it is quite complete, probably more complete than necessary at this stage of a project. The design presented, however, is limited to the scope of supply proposed by Calgon to Reilly. None of the facilities peripheral to the carbon columns are shown or defined. The material presented, therefore, is inadequate for me to determine whether the "system" proposed by Reilly is complete and sufficient to deliver GAC treated effluent from SLP-15 to the St. Louis Park potable water distribution system. The material presented does not define the total scope proposed by Reilly.

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"Process" and "mechanical" related questions which remain unanswered regarding the proposed system include:

1. Is the proposed system upstream or downstream from the existing sand filters?
2. What is the headloss through the system under clean and dirty bed conditions.
3. If the head available from the existing pump at SLP-15 is inadequate to pump through both the GAC columns and the sand filters, where will booster pumps be installed (and are the O&M costs for booster pumps included in the settlement)?
4. If the GAC system is located downstream from the existing filters, what filter piping modifications are included in Reilly's scope of supply?
5. What yard piping is included in Reilly's scope of supply?
6. Will the proposed system (and implied provisions for future expansion) be placed in a building or outdoors? If outdoors, what freeze protection will be supplied?
7. Where will the proposed facilities be located?
8. How will backwash water be provided, and from where?
9. What civil facilities (driveways, etc) are included in Reilly's scope of supply?
10. Are mini-columns to be provided so that alternate carbons can be evaluated?--
11. Is interconnecting piping with SLP-10 included in Reilly's scope of supply?
12. If the system is downstream from the existing filters, what will the operating pressure be in the filters, and are the filters adequate to withstand such pressure?

The city of St. Louis Park could, in addition, be interested in additional information such as:

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1. If a building is proposed, is it architecturally compatible with existing facilities?
2. What event will "trigger" installation of the potential future second stage carbon columns implied on the Calgon drawings.

Since Reilly has prepared cost estimates for their proposed system (presented in earlier meetings) it is a virtual certainty that the above questions can be answered relatively easily. To permit an overall evaluation of their proposal, I recommend that you request the following information.

1. A process flow diagram from well head to the finished water storage tank (similar in detail to Calgon Drawing No. 9209CG-102) showing existing and proposed new facilities.
2. An overall conceptual site plan illustrating the location of proposed facilities and the extent of yard piping.
3. An equipment list showing design capacities/size of major items of equipment such as tanks, pumps, etc.
4. A hydraulic profile through the proposed system.
5. A brief discussion of the architectural concepts for any proposed building (1-2 paragraphs)
6. A brief discussion of what event(s) would "trigger" installation of the implied future second stage GAC columns.

If I can answer any questions or provide additional clarification, please call me.

Sincerely,



Michael R. Harris

jsm/GLT427/25

cc: Chris Grundler, EPA, Washington D.C.